DOE PUBLIC WORKSHOP

SILO 3 PATH FORWARD

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ALPHA BUILDING

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MR. STEGNER: My name is Gary Stegner and I work for the Department of Energy at Fernald and I want to thank you all for being here tonight. Tonight is Phase 3 of what we think may be a 3 part process but again it depends on what we do. We are talking about the pathforward for Silo 3 and as you can see by the agenda Terry Hagen will be our first presenter. We'll have a change of pace and then Jim Saric from the U.S. EPA will speak to us about the recently completed resolution, recently complete dispute resolution immediately after Terry's presentation. As usual as has been the case recently we have a court reporter here tonight transcribing the proceedings so if you could all speak one at a time and speak clearly and give your name the first time you speak, that would help things a lot. We will have a transcript probably in a couple of weeks, it will go to the PEIC which has recently moved to the Delta meeting and if you want a copy of the proceedings, please contact them and they can see to it that you get a copy. We have a fairly large crowd here tonight but because we only have two primary representatives, I think it would be appropriate if a question pops in mind during the presentation, feel free to go ahead and don't hold

your questions until the end. Go ahead and ask your questions, it's a fairly informal manner. So, I'm sure I'm not forgetting anything, I want to remind everybody if you have not signed in, please do so so we can make sure that you're on the mailing list to get any kinds of publications or mailings or information that might be onsite or other internal matters. So, let me right now turn it over to Terry Hagen.

MS. HAGEN: In a couple of minutes, Jim is going to get up and talk about some of the element of the dispute resolution of the OU4. One of the things he's going to talk about is the requirement that we have to turn in a draft explanation of significant difference which is going to propose a pathforward treatment in Silo 3. As far as objectives are concerned tonight basically what we want to do is propose to you what we are planning to put in that draft document right now for a pretty obvious reason, (1) to make sure that we are not in left field and that that is there are any major revisions that we need to do for our thinking, that we get that taken care of before we start the review process of that document with EPA. (2) Presuming we are not in left field, as you recall whenever we go through a review

process and finalize and when I say finalize, come to an agreement on the wording of that document for EPA, it's going to come in before you all in draft form for a public comment and I think the second objective is to let us see where we are planning on going far enough in advance so we can decide any other information that needs a data base that are going to be prepared for that review. Finally, we want to, when the time is right, move forward on getting a draft RF via in front, not only to you but the surrounding community and likewise with the objective, make sure seem to be on track where we are heading right now in putting that together.

To step back, the whole need for an ESD is kind of based on a position or an assumption that we are not going to vitrify the content of Silo 3. We talked about this last time in our second meeting and just to kind of in summary, what I want to go through quickly again why and then move on. The reason really is that we have significant concerns about our abilities to successfully implement the vitrification for Silo 3 and that is driven by several factors but the main one is the high sulfate content. As you may recall our experience with the vitrification pilot plant as well as the experience with the vitrification

industry, but also in _____. Our suggestion would be that to have successful vitrification you have sulphate content in the order of 1% by weight. Our sulphate content in Silo 3 are on the order of 17% and that is causing a problem to the extent we think it will be extremely difficult to manage or implement vitrification. Beyond that, if you look at our rough order of magnitude, cost estimate for vitrification compared to what we think are some potentially viable alternatives that we are focusing on, it looks like the cost of vitrification, partially due to I guess a significant issues in trying to address the sulphates are going to be quite a bit higher in cost associated with these alternatives. The last time, as you recall we asked the independent review team to come in and look where we were at as well as the Army corp of Engineers, value engineering effort to assess whether those costs appear to be reasonable based on the information that we have right now not were they absolutely accurate but they were in the ballpark and the conclusion of those efforts and what they were but they did appear to be in the ball park on what they have right now so kind of in summary a significant concern as to whether we can do it successfully and then we believe there

are viable alternatives that will adequately address the risks associated with Silo 3 that are the least expensive, but list No. 1 is probably the driving reason there.

Okay, if we are not going to do vitrification and our discussions with U.S. EPA, their position that was if a treatment alternative was identified or a treatment option within an alternative of the treatment with the offsite disposal that provided an equivalent degree of protectiveness immobilize the metals and could do it for about the same cost that we originally thought vitrification was going to cost then you could do it within the scope of ESD of explanation of significant difference and again, going back to our first meeting, the principle advantage that we see right now in pursuing this under explanation of significant differences, we would be out actually addressing this issue for at least a year or perhaps more, depending on how that schedule actually went so we moved forward evaluating treatment technologies that could potentially fall under very broad stabilization solidification heading. What we did was if you recall in the first meeting looking at a range of about 17 potential stabilization solidification and broad base sense, alternatives and

screening those down to 3 that looked like it could potentially be viable. Those 3 were cement or similar to cement type chemical stabilization solidification process and that is a fairly broad based family. It is more than just cement. There is a principle additive to achieve the remedial action and then a couple of polymer based technologies such as the polyethylene, micro encapsulation technology and sulfur polymer encapsulation technology. What I am going to do now is kind of repeat a lot of the information that I went over the last time. What we are trying to do was ask ourself once we had screened down to these three potentially viable alternatives, rather any of those three or all three could adequately address the conditions of the ESD and that is that they are approximately equivalent in terms of providing protectiveness and could do it at about the same cost. What we use to do that evaluation was the CERCLA 9 criteria, actually 7 to 9 criteria and I am repeating or summarizing the last meeting. What I want to do right now is again basically give you our thoughts on how these 3 alternatives stack up against the CERCLA 7 of the 9 criteria and as you recall the 9 criteria really fall into 3 groups. Threshold criteria, balancing criteria and modifying criteria

and we are going to be talking about tonight is the threshold criteria and the balancing criteria. The first two up here are what I refer to as the threshold criteria. The EPA guidelines basically says that before you can select a remedy it has to be able to adequately be protected with the human health and the environment and it has to either achieve all applicable relevant requirements or get a waiver to those things. If it can't do that, you cannot consider it for selection. So, this first one is really kind of a threshold. Before you go on and even looking at it further down the line, you have to ask yourself can it do these things. Our evaluation is that any of the three alternative treatment technologies can be protected of human health environment if they function as designed and that is basically because of the combination of two things. What you get from the treatment where you immobilize the RCRA metals and address some level of dispersibility and contaminants which sets up the inhalation of the thorium 230 coupled with disposal in an arrid impacted environment offsite. Basically the existing record of decision for Silo 3 calls for this material to go to the Nevada test site and I think what we are proposing to do is open this up to allow

a potential for other offsite disposal locations but they would have to be in a permitted facility, city engineered permitted facility and the basic thrust of this is that when you combine the treatment with placement in a permitted engineers disposal facility that is going to isolate the waste for any kind of human exposure or ecological exposure, all 3 can be detected.

In terms of compliance with ARARS to be equitable with all of the requirements our analysis is any of these three technologies could be combined with the ARARS and request any kind of exception from the identified ARARS. Okay, once we get through this threshold stage, the next group of criteria are called the balancing criteria and there are 5 of them and that is what we are going to be going over. The idea here is that if you are trying to select amongst a group of alternatives that have already passed the threshold criteria that we have talked about, you look for trade offs to see if anyone clearly emerges head and shoulders above the others. There are no set criteria for waiting. One of these is not more important than the other in EPA guidance. What we are doing is a slight tweak from that. Certainly we are looking in evaluating trade offs among the 3

alternatives. Rather anyone is so superior to the other that we should go with that and exclude the others, but also what we are asking ourselves is is there a basis given in evaluation against these 5 balancing criteria for eliminating any of the 3. So, I'm going to try to be presenting this evaluation from both of those perspectives.

The first balancing criteria is long term effectiveness and that is basically you go out and implement your remedy and it is protected right now but is it likely to remain protective over the long term and the long term is not very defined in EPA guidance but let's say 1000 to 10,000 years. Basically for reasons similar to why we think this is going to be protective in human health of the environment, we think all 3 of these alternatives can maintain long term protection. Again, it's a combination of treatment with disposal and an environment (1) engineered to preclude human ecological exposure but also going along with that, disposal in arrid environments, some of the degregation factors that tend to influence and break these wastes down and make them more available for ultimate long term exposure are not going to be there such as offsite disposal and significant wet dry

sites. So, we think all 3 of these technologies can perform adequately and we really don't see a basis for eliminating any of them in looking at long term effectiveness.

The next of the balancing criteria is the reduction of toxicity mobility or volume through treatments. We are going to look at each of those individually. Reduction toxicity, basically this is perhaps an over simplification but it is, does the treatment technology actually destroy any of the contaminants and reduce toxicity as opposed to just immobilizing decontaminants or something else. Given the nature of the treatment technologies combined with what is in the Silo 3 in terms of contaminants concerned where which are radiological in heavy metals, none of these treatment technologies are going to destroy the contaminants so no real distinction or major advantage here. In terms of mobility, our data base is probably the most significant on cement type chemical stabilization technologies. There was actually some treatable testing done in support of the original OUSF and the results of that testing showed that that family of technologies could adequately immobilize the RCRA metals to the OU standard. We don't have the same degree of Silo 3 specific testing

or for the encapsulation technologies but there is a fairly good base of bench scale which in some instances is pilot and limited commerical scale data available for the encapsulation technologies and the result of that on reasonably similar waste forms with the same types of RCRA metals indicate that if these technologies perform as designed they can adequately immobilize the metals so it looks like no basis for eliminating or identifying that one is head and shoulders over the other here. In terms of volume there will be a volume increase associated or there is an expectation that there will be a volume increase associated with implementing the cement or chemical stabilization technology. Our current estimate is about a 20% volume increase based on how much moisture content is in the waste and what we will have to do to immobilize these metals and that will be nailed down with more detail to treatability if it is going to be implemented. We don't have probably the same degrees of information again such as treatability testing to make this definitive of a statement for the encapsulation technology but a review of what has been happening at Brookhaven and other applications where this again has been going through this bench and pilot skill tests for application as well as a review of EPA

literature suggests that we are going to be in about the same ball park as what you can see from a cement or chemical base stabilization technology. There is a potential that we could get lower volume increases from the encapsulation technologies that would have to be laid out through additional treatability and proof of process testing if that were to be selected. To get back to the point, I don't really see any basis here for eliminating any one technology here suggesting that I think one would definitely perform as far as superior to another.

MS. CAMPBELL: Terry, can we ask questions?

MR. HAGEN: Yes.

MS. CAMPBELL: I guess before you, in my mind, before you could make the choice of the three, I guess I would need to see that 20% volume increase somehow and is that something that is going to have to happen before you pick or choose or we pick or choose or whatever?

MR. HAGEN: How about if you see where we are going with the recommendation and come back to that, if that is okay. What will happen is and somebody if I say something wrong or whatever, correct me. That 20% estimate again is based upon a couple of things such as the existing treatability testing that

was done in support of the OU4 FS with people like Christine Langton and, it is an estimate. It could be more than that. I'm not trying to sail that one way or another. Comparatively we could see something less here and I guess the one point I want to say is we don't think based on what we know there is a basis for saying one is a lot better or a lot worse than the other. It could be an advantage or volume over here. Depending on what gets identified in the ESD, whether is one or more technology, the next step on the process is going to, once the ESD has finalized is to go out and treat it. It is my understanding that what we are going to ask them to do is limit treatability study type testing as part of their proposal that would give us information in evaluating specific proposals so we will get some vendor specific information that I think would help us look at that prior to selecting an individual vendor. In terms of your question, I don't think we envision any more specific treatabiilty study information to support what goes into the ESD, okay?

MR. MARTIN: What is the waste loading function in that 20%?

MR. HAGEN: What is the waste loading assumption on the 20%?

MR. PAYNE: Upwards to 70 or 80%.

MS. CAMPBELL: I think Mr. Payne should come to the front of the room.

MR. PAYNE: The important thing you're hearing is the volume increase that calculates the waste loading aspect in a number of different ways. It is a lot with the density so when we are comparing waste loading aspects, you are comparing like apples to oranges. What you are looking at in the total volume that comes out in the end.

MR. MARTIN: That is with the water, the 70 - 80%, right?

MR. PAYNE: That is with the water.

MR. HAGEN: Okay, next to the balancing criteria is implementability. Implementability in the guidelines is really divided up into two parts, administrative implementability and technical implementability. I talked about last time I think the most meaningful measure of administrative implementabilty is our ability to meet or successfully satisfy any kind of conditions for disposing at the offsite disposal location be it NTS or commerical facility. What we have chosen to focus on for the purpose of this evaluation is NTS and basically what NTS has said is that they have looked at the

conditions and characteristics of the Silo 3 waste from a contaminant concern perspective of radiological contaminants and what they have said is that assuming that the treatment satisfies the waste acceptance criteria which the relevant statement here is if the treatment mobilizes the RCRA metals then we are able to demonstrate that through a sampling analysis program and the waste in Silo 3 would be acceptable for disposal at NTS. So, what they are saying is that again jump in Don, if I'm saying something that's wrong, the treated waste form itself is not critical to the ability to dispose of this at NTS given radiological characteristics of the waste form that can go into the condition of the existing completed PA. Just so long as we meet the waste acceptance criteria of NTS and the relevant ones here are when we get done treating this stuff is it going to pass TCLP for those RCRA metals? Any of these 3 technologies, just so long as it does that, just as long as the waste form is acceptable (inaudible) is that fair, Don?

MR. PAYNE: Yes.

MR. HAGEN: So, all of these performed fine. No basis for excluding or highlighting one on this. The technical implementability -- I guess a

couple of statements here. In the handout package that I gave you well, let me get to that. In terms of technical implementability we think there is probably a basis for saying that the certainty of successful implementation for a cement or similar type stabilization solidification technology is higher because there is a greater degree of commerical experience and commercial development, and industry experience with those technologies compared to the other two. I am not saying that the other two are not implementability. I will get to that in a second. What we did to support that statement was went out and looked at basically U.S. EPA's record of decision data base to see where have they applied any of these three technologies in a record of decision or has that been a selected remedy and what was the waste type, what were the contaminants concerned and what were they trying to achieve and was it successful and basically what we found is there is a much larger track record for the cement or similar chemical stabilization solidification technologies. There are some limited applications the encapsulation technology but because of that we think there is probably a basis for saying that we are more certain we can successfully implement this. Again, going back to what I just said though

that is not to say that we believe the other two are not implementability. There has been a fairly significant base work done by Brookhaven National Lab focusing on polymer encapsulation technology and there have also even been some commerical scale application I believe in the commerical industry on a limited basis and I think some vendors are looking to beef that capacity up. Likewise for sulfur polymer there has been some commerical application at SEG so there is precedence out there for saying these technologies can be applied for purposes of immobilizing RCRA metals and solidifying the waste and because of that while we think there is an advantage in this particular criteria or cement, we have not identified a basis for saying that we should explode the encapsulation because there is no basis for suggesting that they are implementability because there is a fairly good base and pilot scale data, particularly for the polymer microencapsulation technology but there is also some out there for the sulfur polymer.

MS. CAMPBELL: I don't think that is a fair -- I don't have to tell this lady who I am, she already knows who I am. I look at it, I'm going to be real honest with you and that is all that you ask us to do. I look at this, I don't see the polymer

encapsulation and sulfur we will get to later because we need to talk about the odor that comes from that but I think that is a real unfair statement to say cement is the least complex and the other two are more complex because I don't see it that way at all. You know, I mean I went to Brookhaven two weeks ago and I saw this polymer encapsulation thing and I would say it did not seem to be too complex to me. It seemed fairly simple. I mean, I want to make sure that you all are not, I'm looking at the scene saying it's looking really weighted to me.

MR. HAGEN: Well, I don't know if you've looked ahead in the presentation and hopefully you maybe not think that in the end but this is the only one where I think to me you are clearly it. I think an advantage emerges for cement.

MS. CAMPBELL: See, to me --

MR. HAGEN: And that's the kind of feedback we're looking for.

MS. CAMPBELL: Okay.

MR. CHANDLER: Jim Chandler, am I correct what we are talking about is taking Portland cement and using Silo 3 as the aggregate to make up the form of concrete, is that essentially what I am hearing?

MR. HAGEN: Not necessarily. We would go out

on the market, let's suppose we only identified the cement or chemical base stabilization technology. There are other potential additives that are proprietary in nature that fall into this family of technologies that could be applied so it is not as simple as saying we are going to go four sacks of cement in Silo 3 mix it up and be done with it. There are other -- it depends on the vendor. They would come in and propose based on their own specific process and that could include other types of additives that are in essence designed to achieve the same objectives.

MR. CHANDLER: The reason I asked, after our last meeting I have a customer who runs 6 concrete plants in Kentucky and I went to him and he had no interest in our operation up here and I basically asked him county concrete, the guy has been in business 20 or 30 years, Delvage Johnson is his name and I outlined this to him and what we were trying to do and I thought it was basically take Portland cement and blend it in with Silo 3 and maybe choose other aggregate involved and he asked me what we were processing and I told him I said sulfate and he said Jim, you cannot expose concrete to sulphates. He said 50 to 100 years from now it is a pile of dirt. You

cannot even tell it ever was a form of concrete and I say this because U.S. EPA is less than 30 years old so their history does not last as long as we are trying to talk about. I bring that up now because I was just trying to find out how to blend all of this.

MR. HAGEN: Something we tried to cover in the first meeting and maybe we did not do a very good job just based on what we have been hearing. We use the term cement stabilization solidification and I'm not sure in hindsight that would be the best terminology for typically what we've got is some additive or a combination of additives that chemically stabilize the waste and then in lots of instances there is an addition to that cement type additive that is designed to be kind of the glue for the stabilization. It solidifies it together. In many instances it's a two step process. That is not to say that cement does not have limited ability to chemically stabilized waste but within this general family of technology, could most certainly be a process that is really almost a two step process where one additive chemically stabilizes or a combination stabilizes followed by cement or a cement-type and glues it together.

MR. CHANDLER: His comment was Jim, in any

cements that I know of, now this is coming from a man that has been in this concrete business for years and he said hydraulic cement and he started naming things that I've never heard of and he said what happens it sets up and forms a beautiful concrete and it is solid and appears stable and it will eventually reach a certain level even in the desert of hydration and he said when it finally stabilizes a hydration is present, whatever it is it starts to react with the sulphates and the sulphate breaks down those chemical bonds. He said it doesn't happen immediately. He said he does not happen in 20 years, but he said in 50 or 100 years if you go back and examine any concrete whether hydraulic and he did this kind of a check list, you will discover the chemical bonds that have been destroyed and you have a pile of dirt so it's something you really have to look at for a long term stabilization. This is coming from someone who has no interest at all in our project. I have known him for half a dozen years and I have done business with him and I was not even posing that question. I was asking how to go about blending this to make it work best and he was going along until I said sulphate and there was a red flag like vitrification.

MR. BOGAR: I am bothered at the fact

that some of the terms or some of the statements that are made, particularly under technical criteria as well as previous criteria comparing the 3 alternatives used words like pilot scale testing on waste similar to Silo 3. To the best of my knowledge --

MR. HAGEN: What do we mean by that?

MR. BOGAR: No, let me finish. My impression is that the material in Silo 3 is somewhat unique and the DOE system in that it's calcide rafinate calcination is used in cem-plant, solidifies in calcinate waste come from Idaha. If I go through your list I don't see anything which tells me that anywhere in the DOE complex people who have looked at calcide waste. Under the technical when you are saying successfully implemented mixed waste, that's okay. That has been successful on thorium waste. Thorium waste is not like what is in Silo 3 and I don't see any simi-la, semi-les from stuff at DOE on your list here.

MR. HAGEN: Say that again.

MR. BOGAR: I don't see any similarity to the experience base that you are talking about because this material is different.

MR. HAGEN: That is a fair comment.

MR. BOGAR: The chemical factors become

important and in many places the DOE, they have been surprised by incompatibility.

MR. HAGEN: It is probably fair to say that that is applicable for any waste form in the world. They are all slightly different and our requirements probably a tailored list.

MR. BOGAR: I am just putting that on as a statement, be comfortable because there is always experience.

MR. HAGEN: That is a good comment and I think we can address that. Let me go back and say No. 1 I think we will revise that to try and address this feedback but that is relevant I think. No. 1, let me agree with something that you said. I think any waste stream anywhere has enough unique characteristics that you are going to have to tailor a design that any of these technologies to make it work. So, what we are trying to say is are there other waste streams that are, that were let's say a similar consistency that had other similar types of contaminants are concerned where they did this successfully at least to give you some indication of whether it works. The most relevant admittedly was what we did in Silo 3 and OU4 and I agree with you but again, the intent was to say was there a basis for saying it probably could work. How

do you go from probably to a much more definitive base of knowledge and I think that gets into the Silo 3 specific type treatment that will be part of the procurement process so we will make some changes to address that comment and I'm also going to try to clarify the intent and what would come next in the process and I think you're going to have to address that issue for any technology.

MS. YOCUM: Well, my comment is similar to what Lou is talking about. We made, you made a $42 million mistake with vitrification and here again there is not enough information here to explain how these cementation or polymer or sulfur polymer is going to work. It is still guess work and it seems like the vitrification plan was guess work also and found out that it had too much sulphate in it. That was a $42 million mistake. Are we going to have another one?

MR. HAGEN: A couple of things. There is no denying what happened with vitrification and that's why we are looking for an alternative and that's why we are in this process. What we do know about these things and I'll go back and say what I did say is we tend to know a little bit more about cementing because we did some specific testing for cement or similar

chemical based technical for actual Silo 3 waste and we've got a basis for saying that could immobilize the metal which is our objective. So I think we've got a basis for saying with some confidence that it could work. Does that mean it's absolute, no possible way anything could go wrong, no. The next part we're trying to say up our confidence that whatever gets selected will work and I'm going to cut to the chase a little bit if you don't mind and we will go through a couple of these things. When we get to the end what we are going to propose is that based on what we have seen in this evaluation and what we believe is out there in the industry is that we don't see the basis for eliminating any of these treatment technologies as being applied to Silo 3. So, what would be next? What would be next would be a procurement process. One of the first steps in that before a vendor can propose back, at least any response is some treatability type testing using actual Silo 3 or Silo 3 surrogate type waste to demonstrate with a greater degree of confidence whatever process that they are proposing can work. I cannot, I guess, completely address that there is some uncertainty with anything we choose. That is true. That is a fact. If I were giving my opinion, I think there is a little less uncertainty

with the cement type because we have some Silo 3 specific data but for those of you who have been and seen what Brookhaven has to offer, I think there is a basis for saying that that probably can work and Lou made a good comment, but I think there is something that says if you look at the types of materials that they work with, the physical characteristics of the waste and contaminants of concern and what they are trying to achieve, we think there is a basis for saying you need to be able to at least give vendors a chance to show that they can work and that would be the next step in the process as part of their proposal. Actual testing on the limited scale to show that it can work. Then, I think even after they get on board before we turn them loose you know, to go full scale there will be an additional phase that their process can actually work. I think that is going to be the step process no matter which of these we ultimately select. We're going to have to go through and address what is somewhat uncertain.

MS. CAMPBELL: Go ahead and finish this. We have lots of questions.

MR. WILLIKE: (Inaudible) the other two are a physical process due to primary parameters of moisture content and the second comment I would make

is while I don't disagree that any of these should be eliminated at this stage, they are also possibly viable in the option of something that is omitted from the cement stabilization is a comment that was made by the independent review team a number of times and that was the quality control of chemical mix was an extremely part and we went through this need to make an adjustment and that was really an event and many of the failures of the cement stabilization wherein the quality control (inaudible) so that adjustment was (inaudible) that is one of the more important issues that would have to be addressed, how would you get the information from the material if indeed (inaudible) in the chemical composition and all this is coming through in a matter that has come back from last week.

MR. HAGEN: All right, I will try to quickly go through this list and then get to your questions. The next is short term effectiveness, worker risks and risk to the public during the implementation of the remedy and focusing on transportation risks there and also clean up on the protectiveness.

In terms of workers risk we said last time and we are saying again there is probably some slightly higher worker risks associated with the encapsulation technology because they both involve higher operating

in terms of the cement stabilization. Of course chemical stabilization is typically ambiant process but we think that we can manage those lists and don't see a real distinguisher there. There appears to be a possibility of a more significance of gases associated with encapsulation technologies. One in a particular sense because you have to dry the waste out to a greater degree than they are probably, then cement stabilization and for that particular reason it is on a short term this year. And then also because some of the material particular material of construction in this case the sulfur polymer and additives, there is specific chemicals of gas issues that you don't see with the cement stabilization but then again those would be managed by the off gas system. I don't see any real distinguisher here. There is a slight difference in our minds.

Clean up time, we probably feel most certain in making an estimate right now based on some of the discussions with the community and etc. related to the cement stabilization and you can see what we are talking about there, however, when we look at U.S. EPA literature we don't really see any reason to believe you would be seeing a significant difference in clean up time from the encapsulation technologies so once

the major differences, we are certain that they could include one or highlight one over the other.

In terms of the calculated transportation risk because of a combination of the treatment itself and it really does solidify the waste, it addresses this contaminant dispersibility issue combined with a containerization requirement from the U.S. Department of Transportation. The calculated transportation are just orders of magnitude below U.S. EPA guidelines for all three. So we think all three perform extremely well from the perceptive of management transportation risks.

MS. DUNN: On the clean up time, does this include the extraction, I mean, what is happening and how all that stuff is coming out of the Silos or is that over and above what is listed here?

MR. PAINE: That is what is estimated from the Silo 3 standpoint based on the capacity we think we would get with cement type processes versus retreating, stabilizing and we are not necessarily including the process that we had it shipped off in that point. The overall process treatment aspect would be in that kind of a run.

MR. MARTIN: How many times a day is that assumed?

MR. PAINE: I forget the exact tonage of it. That's running essentially, you know, two shifts a day with one for active and --

MR. MARTIN: It is not the 175 tons a day number they had for all 3 Silos?

MR. PAINE: I don't know.

MR. HAGEN: Finally on cost because of you know, a greater degree of Silo 3 specific information with treatability etc. we want to quantify the _____ magnitude and cost estimate for cement or stabilization about 25 million. We don't have that same degree of Silo 3 specific data for the encapsulation technologies, but again, based on the conversations with Brookhaven National Laboratory and other people involved, we are attempting to develop this technology as well as review of U.S. EPA literature. The expectation would be the cost, which would be similar. So, no real distinguisher here and we are certain that if any of them are eliminated and if any of you are highlighting one for the other, I already cut to the chase and told you what we were going to put up here. The big theme of all of this was in looking for treatment technologies to satisfy those conditions that I set out front and that was (1) they could potentially be roughly equivalent in terms of

providing protectiveness to vitrification and satisfy remedial action objectives of RCRA metal and immobilization on the onsite disposal facility waste acceptance criteria and then using the 7 of these CERCLA 9 criteria as an evaluation tool to see how they stack up against that, within the broad base alternative of treatment involved in the offsite disposal, we don't really see a basis for eliminating any -- I hope we have not confused anybody by putting two up here. Right now, what we are proposing to move forward with the ESD would be the alternative treatment with offsite disposal treatment as to address the remedial action objectives that are already set forth in the Operable Unit 4 record of decision acceptable treatment technologies within that alternative would be a cement type or a chemical based stabilization solidification type technology or a polymer base encapsulation type technology and that really encompasses the two that we have been looking at.

Let me do one thing. The thing that might come next depending on how the rest of this meeting goes. The next stage of the process is and I kind of alluded to Gene with it and that is that we edit to EPA no later than September 15 under the conditions of

the OU4 dispute resolution agreement a draft ESD. Now, when I say that's going to go through a review and approval site, that does not finalize ESD. All I need is, we are going to go through a cycle with the U.S. and Ohio EPA of agreeing to the wording and evaluation and basis for this recommended pathforward so that will be occurring again depending on what happens here over the next few minutes. We can probably do that some time before the 15th to save some time. That would process what occurred depending on how significant the regulators comment were over the course of a couple of months. Once they approved it for public release then you would put that out just like we used to put out a proposed plan and that would go to all of you and initiate a 30 day public comment. We would have a public meeting during that just the way we used to do that during the review stage and you could bring comments that would be accepted formula and you would have the opportunity to submit it in writing. After the public comment period closes, DOE is committed to respond in writing similar to what goes on to the rod and addressing all of those comments prior to finalizing the ESD and the U.S. EPA so that would generally be the process that would play out. Again, the only existing mandatory and

regulatory deadline was submittal of that first draft to U.S. Ohio by the 15th and therefore not totally in left field, we would probably do it before the 15th and get the process going sooner than that. Questions?

MR. MARTIN: Terry, this is not precluding off site treatment?

MR. HAGEN: I'm going to refer a little bit to Jim on this. Basically one of the conditions that the EPA has stated, we have been talking about this as recently as today, either EPA's position is that if any of the requirement treatment is to occur off site, it will require a rod amendment.

MS. DUNN: Why?

MS. CAMPBELL: Yeah, can you explain that, I mean --

MS. DUNN: The disposal litigation -- the test site that is stated in the current rod, you can open that up and it is still in ESD but you cannot open up whether it is treated offsite or onsite? I don't understand.

MR. SARIC: The fundamental remedy is the extraction of the ways onsite and offsite disposal and the only reason we are not doing it in this DOE for Silo 3 happens to hinge around the fact of the cost.

It is the same as these other remedies. They are not changing what kind of remedies, strictly the waste from the Silos and onsite and offsite disposal and if you go and take it out of the Silo and you do have offsite treatment and offsite disposal, you are fundamentally changing what is remedy and that would require a rod amendment and we made this clear. I think with the DOE a while ago.

MS. DUNN: But cement is not fundamentally different than it. The only thing different in my mind between cement stabilization and vit is cost. I cannot even accept all that because of the screw ups that were involved. The technology of vit was not the problem. You've still got to deal with the sulfate. Cement, whatever, has sulfate problems. You know, blame it on cost and time and this and that but, I mean, I don't understand, I don't understand how your drawing these lines in the sand. I mean the rod does say disposal of the test site, but now you are going to open that up? What if there is a tremendous cost of saying to have it shipped offsite for treatment and disposal?

MS. SARIC: I think if we look in the situation we have a tremendous cost saving for offsite disposal. I mean offsite treatment and more

importantly if you can go you can significantly expedite the amount of time it would take to get the stuff offsite faster, have it treated and disposed faster than I think we can look at it in the form of a rod amendment. But that is a legal matter that will have to be a rod. That is something that I can't tell you. People will have to go with that. Now, the rod itself, the rod amendment itself is more than likely going to take more time to implement that then ESD.

MS. DUNN: Would you run on the same track with 1 and 2 if that is what is happening?

MR. SARIC: Well, initially bringing on negotiations, we are looking at what we saw about Silo that we looked at and how are we going to address all three, rod amendment, we represent doing one and regulatory mechanism as opposed to two going on at the same time. Certainly when you look at the dates, close to the date a lot of them refer to -- what dates are we going to go with the Silo 1 and 2 and what are we at best following and those dates were extended I think beyond what was going on but we were really pushing to make sure that one activity occurred onsite right away to show progress and move forward on Silo 3. Given the information for some of the task force and things like that, they all made it clear that vit

was not an option and, you know, it's not going to work. You need to pursue something else. I think other stabilization technology such as cement that are out there are certainly more promising and I think the right thing is moving forward with the ESD for Silo 3 because we are more certain with the Silo 3, what pathforward to take.

MS. DUNN: See, I heard the same thing. Cement doesn't like sulphate any better than glass. You've got the same problems with cement as you do with glass because of the sulphate content.

MR. SARIC: I am certainly not a cement expert but I do know that any other kind of waste form sulfur may be a problem but yet you can still get the type of additive to put in there to make a type of cement to be a glue to put those grains together. It can be done. That's why we go back and some vendor would do some type of treatability work to prove it can be done. The same thing would have to be done for the microencapsulation.

MS. DUNN: Does anybody know the effect of the encapsulation or process or is that not as big a problem?

MR. PAINE: No, like I said before and I think Gene tried to say it, it has no chemical reaction.

You are not treating any of the constituents. All you are doing is encapsulating waste. In this case we would do it on a real micro level which the advantage for encapsulation is that you have to have a very non-porous kind of material and that is what you get with the encapsulation. It's bound up good and it needs to be a lot less porous like cement is and that is where you get the advantage so there is no real reactivity with the cement. It's been known for a long time, cement don't like sulphate. That was one of the earlier problems we had when we first developed this particular technology 15 years ago. There is different types, a Portland 2 cement and a Portland 3 cement that have been developed with certain different additives to handle what the problems of the old Portland cement are but the reality of that is so it breaks up. When I do the CLP test, what I do with cement, I break it up into pieces and leach it. It's got to past the CLP test and it's not leachable. What advantage do I get with the cement. What I get with the cement is I put something in there that makes the constituents more soluble and not mobile therefore if it does break up, so what. It's still not leachable so it does not really matter from that kind of a standpoint. The polyethylene and stuff like that,

what they rely on is the fact that they get very microencapsulation stuff so when I break that stuff out, you don't get a lot of interconnections and stuff with that so I don't get the, you know, the little acid aspects of it down in there far enough to get a significant amount of material so that's what it counts on. It has to be really nice and tight and those kinds of things and that's all it's got. So there are both pluses and minuses and those are the things that you have to be concerned about. You are treating the constituents. You got the encapsulation stuff, you're treating the whole mass so the durability of the material is far more important than it is in the cement. That's what you are relying on. You are relying on the waste or what you have encapsulated or solidified. The other one, you are not as constrained by that particular activity. So those are the kinds of things that have been happening. The difference in the vitrification and the cementation with the sulfur stuff is any cementation stuff you will find it right up there that have a lot of those kinds of problems associated with the sulfur. Some of it is going to react in the vitrification process, the way we handle it there is we have to drive it off. The glass will not handle it. If it's

in the glass you will get de-vitrified glass and it will fail right off the bat so you cannot use the glass. So we drive it off and we treat it down line. You get your 50% volume reduction that you are shipping offsite because I am treating that 50% that got reduced onsite. Okay, that's the only difference. It's not like it just magically disappeared. I'm still dealing with the dam thing. I'm just dealing with it here, I'm not dealing with it up at the Nevada test site. But I've got to deal with it here, it doesn't just magically disappear and everything is just peachy clean. But the important thing to vitrification is that the dam stuff cannot be in glass. It will kill it dead. I don't want the cement stuff in a short time frame reacting and causing me not to get a nice solidified affect that is going to last for some length of time but I'm not so concerned about the durability of the cement aspect because I treated the constituent. And we wonder what we've got in Silo 3. We treated it twice. It went through some solid attractions with some really advanced stuff and then we calcide the heck out of it and the only bad thing about it was is now we have small fractions of all of the calcic metals that are right down there at the same length that did not quite meet. Otherwise the

stuff would not be stabilized anywhere. I would just package it and ship it so I don't think -- what we are treating is far less than 1% of the total amount of material that's in the Silo 3. Just a small fraction. You know, and that just happens to be the bad break. The calcination would have handled it, but we would be shipping it out the door right now. With the right to the Nevada test site and just like the other stuff that we sent there but I've got that one little glitz so I've got to stabilize it. There's a huge amount of material and a huge amount of constituents associated with what we are treating, hell no, just a smaller part, but I gotta do it.

MS. CAMPBELL: Where are we at with the RFP, is the RFP ready to hit the streets?

MR. HAGEN: I think it depends on the results of this process. The answer is and it is probably not far off.

MR. PAINE: It's pretty dang close.

MS. CAMPBELL: I guess one of the things I thought, I want to make sure I am getting this right. You are asking us to make this decision this evening but yet I am sitting back going I kind of want to see what comes back when the RFP hits the street. I kind of want to see what the vendors kind of send back to

us that we can kind of sit down and take a look at.

MR. PAINE: Remember what we're doing. When we say we are submitting the RFP, it's just a draft. It doesn't commit. We are sending it out to all vendors, we are sending it out to you, we're sending it out to regulators. We're sending it to everybody just to get comments on it. It's not the final one that goes out and sets the contract.

MS. CAMPBELL: But you want the RFP to hit the street with just these two?

MR. HAGEN: As opposed to more, the answer is yes, but what we want to do right now is structure the RFP's so that a vendor can be responsive if they bid on either one of these two and they provide back a proposal based on their specific process.

MS. CAMPBELL; Well, then I guess I would be really interested in seeing and Jim don't cringe because we cringe quite a bit lately. I want to see offsite treatment versus onsite treatment. I want to see some really good hard numbers on that and I also want to see some really good hard numbers on the volume increase. I mean, those are two areas that we all are just kind of sitting here going excuse me, this does not make any sense to us. I don't want

these estimates, you know. I tell you, I have talked to an awful lot of people in the last two or three weeks and you say 20%, there is no way. Absolutely no way. We are typically looking at 40 or 50%.

MR. HAGEN: What we are doing right now is under the terms of the ESD basically we have a legal and forcible agreement to move forward to the ESD but let me say differently so right now until information comes back and says there is a better way of doing it we are going to honor that existing regulatory agreement.

MS. CAMPBELL: But if the information comes back and says this can be done much cheaper and quicker and all those little fancy buzz words that DOE loves these days, does that then give us enough weight to pull back and say wait a minute. If it's going to save millions of dollars to treat it and dispose of it offsite, can we then stop? I mean are we locked in here, that's the bottom line?

MR. SARIC: I don't think we're locked in, Lisa, that's not the case. I think certainly our pathforward is the ESD. If this information comes forward and it's there, we will consider it and also when considering it we will do what everybody else wants to do. We'll go and do another regulatory that

can do a rod amendment. We will amend that dispute again and go and do another pathforward and do, you know, go down that road, but I think the key thing that you said has to be faster and it's going to have to be more cost efficient and it is something that everyone wants and that is the position that will have to sell itself. I really think that's going to get it.

MR. PAINE: I want to say something about the onsite versus the offsite. Everybody gets so tied in on the treatment part of it and that is one small part of the project. If you look at the overall cost associated with this particular activity, where are all the costs at? You've got to retrieve the waste regardless of whether you treat it onsite or offsite.

MS. DUNN: That is going to be the contractor or the site?

MR. PAINE: The contractor so he's got to retrieve it whether he does it here or whether he does it there, right, because it's here. I've got to get it out of the Silo. The other big cost of the thing is the packaging and shipping and disposal costs. The vast majority of the cost associated with the project are in those areas, regardless of which technology on the processing aspect goes on to it, when they do it

onsite or offsite, that is still a minor amount of the overall cost to implement the overall project so, you know, in my mind I'm not sure exactly what the advantage will be but there may be.

MS. CAMPBELL: I think it's a curiosity on our part.

MR. PAINE: Sure, but if you look at the overall project, you have certain costs for the majority of the costs are regardless of where it is treated. Everybody kind of gets hung up on the treatment aspect of it but that's really the minor cost of the overall project is that interim little step, but a very important of the overall project. That's not what all the cost of the project is.

MR. HAGEN: One thing on that, we had the discussion of course but based on what the EPA's position is right now, we are implementing the ESD, but moving forward with draft RFP where we are evaluating ways to structure that, to get the information that you are talking about and basically combined, (1) making a vendor, in your words, to propose an idea of having to do it offsite that would have to address all the types of issues Don is talking about and address performance criteria or the treatment transportation, etc. and also have to factor

in or we will have to factor in the time we would lose associated with the rod amendment process. If it performs well still the combination of all those things, what we discussed with Jim is we're going to put it on the table to him and the stakeholders and see if they will accept it. So the short answer I hope is that right now we are trying to structure the RFP to get that information to see if it's a valuable pathforward. Until we get that and put it on the table with you and Jim, we are going to have to honor the existing regulatory agreement.

MR. RAFFERTY: I agree with the statement that Terry made earlier however I think maybe what is confusing is chemical stabilization is being looked at as cementation. We do probably more treatment of this kind of material, chemical stabilization and I'm using the chemical stabilization each quarter than you have inside the Silo 3. We have been at for about two and a half years. Cement is the last thing we would use and let me tell you why. Traditionally cement has not been the best -- if you're familiar with Oakridge and -- we have over 70,000 cubic feet of waste out at Oakridge and we treat a lot of that stuff and we just have a contract this year to re-treat all of these cement out at Rocky Flats and then Terry made a good

comment when you say (inaudible) creates a different image implementing the chemical stabilization as a good approach, but the results that we seek in our treatment is not a hardened piece for two reasons. One is we are looking for the most stable form of waste for long term stabilization and a landfill, anything like cement that you mentioned crumbles and creates (inaudible) and we are looking for the metal and just to share some of that and I thought it would be useful for you. There is material out there that we can look at that is required by the regulators to (inaudible). I also agree that a lot of comments that you made, Lisa, really looking at the big picture, I think we're all looking for something that is faster, less costly and is just as safe as we can meet the safety requirements and make it lower in cost and do it faster and turn around every day that it's sitting there and evaluate and the cost is also money, if you look at the time it takes to do a rod amendment and add that to the time it takes to do an offsite treatment and the total time happens to be comparable or less than doing an ESD and prepare for onsite treatment then maybe we have something to look at. I don't know exactly where we will end up but I do know based on the speed of chemical stabilization that we

know we practice every day, it is far easier and much lower in cost if we are able to have this waste and condition first before any opportunity to make sure it is in shape that can be transported. You don't want to transport powder and run it through the system, the very large system that is already in place. If you wanted a car, you would do go to an assembly line operator making 100,000 cars and not as opposed to building it in 5 days in smaller facilities and then you are understanding where we are coming from. Offsite treatment will have the potential to be lower in cost and much faster turn around, but you don't know how long it takes for a rod amendment and if that is a very lengthy process, it took 3 years to create the rod and we are gaining 6 months of turn around time in an offsite larger established facility. It just does not make sense. I agree, but I think we really need to know what about also one of the factors that currently we are planning to have polymer based (inaudible) encapsulation which will be in operation by (inaudible), by the end of this year or early next year and it will be the second thing we have not really looked at any (inaudible) that would be the best solution and I think you mentioned we don't know enough about waste so the useful phase would be to

look at the waste and have experiences made and be able to see if it is a 20% volume weight using chemical stabilization or what. I think there is limited information to use.

MS. CAMPBELL: When that RFP goes out on the street it is going to have to tell these potential folks pretty much up front, you know, what is here and what we have and what we think we have and I mean wasn't there even discussion that we were going to give them some of the waste.

MR. PAINE: That is part of the RFP process that they will all be given the actual Silo 3 material and utilize the process.

MS. CAMPBELL: What kind of a time frame are we looking at for that draft RFP?

MR. PAINE: The draft RFP, we were originally on schedule and we were supposed to go out with it around the time we went out with the ESD which would have been around September to the first of August time frame so we would just go out on the street with it and start getting comments back.

MS. CAMPBELL: So, September 1 we are looking at?

MR. PAINE: No, the first week of August it will be out on the street.

MS. DUNN: Next week.

MR. PAINE: Yeah, pretty close. We're ready to go.

MR. MARTIN: Before you have the ESD in place --

MR. HAGEN: It's a draft.

MR. PAINE: All it does is go out to the guys at Environcare and everybody else and get their feedback on it and then we're going to get some issues resolved earlier on instead of having to go out with the formal one and have to work through that process.

MS. CAMPBELL: How much time are we going to give them to look at the thing? A month? 60-90 days, whatever?

MR. PAINE: There is so damn many review cycles, I'm trying to remember which one actually -- I think it's a fairly substantial amount of time.

MS. CAMPBELL: So, when all those comments come back from that draft RFP, including ours then are we going to come back together and have another one of these Silo 3 meetings?

MR. PAINE: I think we should.

MS. CAMPBELL: Absolutely. So we can look through all of them and kind of see what they --

MR. PAINE: Absolutely.

MR. HAGEN: We talked about that at our first meeting if that's what you want to do. We will go out with the vendors and you guys at the same time to make sure there was a general line as to what that thing said when it goes actually on the streets for real.

MS. CAMPBELL; And when those comments come back and if we can sit down and clearly look at those drafts, RFP comments, Jim from U.S. EPA that it is cheaper to do it, treatment offsite versus on -- I mean that's when we will have to sit down and make that decision?

MR. SARIC: As long as those numbers are real and it's real dated to produce my people that it's not a smoke screen of information --

MS. CAMPBELL: Kind of like the DOE smoke screen?

MR. SARIC: And then we all agree that it's real and the pathforward and that we want to go on and then we will look into doing it, if we have to, doing a rod amendment and going for that pathforward. But right now we're going to proceed down our existing ESD course, even Mr. Rafferty said he was not sure how it was going to turn out with the time and schedule.

MS. CAMPBELL: But is that going to be made

clear enough in the RFD?

MR. REISING: Yes. I've talked to Jack and that caveat the RFP will be caveat, as Jim says, right now, we just signed up. We have September 15 ESD date. That does not preclude us from going out to the street with the draft RFP which says opportunity for offsite treatment but based on the regulatory interpretation it would have to have the caveat which will require the rod amendment so any responsible vendor needs to take into consideration the amount of time and all that goes with it, the rod and the process.

MS. CAMPBELL; And that basically screws us -- oh well.

MS. DUNN: Is retrievable and transportation going to be part of the RFP for the vendor to decide or is that to be decided offsite?

MR. PAINE: No, that's part of the vendor program.

MS. DUNN: So they will decide if it goes out in the white metal boxes?

MR. PAINE: You betcha. They have most of the wagon on this trip.

MR. HAGEN: They will have to comply with the Department of Transportation. They're going to have

to comply with terms and conditions and that kind of stuff.

MS. DUNN: And the shielding and that kind of stuff?

MR. PAINE: There is not a lot of shielding with Silo 3.

MR. HAGEN: But there are specific ARARS on transportation.

MR. WILLIKE: I have a terminology question for Jim and it relates to this onsite, offsite business. Is treatment considered to be a unitary concept or could there be two stages of treatment, one stage being onsite which would be considered an ESD and the second one taken some place else?

MR. SARIC: I tried that and it is, the treatment that would be required for, if you look at the case for example if you were going to, you know, the bulk of the offsite treatment is offsite and you wanted to "condition" the waste and basically when you say conditioning the waste you are conditioning the waste for transportation to meet the transportation regulation is what would go on. That would be gotten "treatment" that would make the same spirit of what our existing requisitional requirements are so I guess I am not directly answering your question but I think

I'm getting to the bottom of it that if no matter how you slice it, the concept of taking it and doing some conditioning onsite and then offsite treatment and offsite disposal will have to require a rod amendment.

MR. WILLIKE: I'm not necessarily talking about conditions but something perhaps beyond conditions but would be a real treatment. I think it is something that leads to some risk reduction but perhaps another stage at a remote location they did something else perhaps to make it meet some other aspects of the waste acceptance criteria of that site.

MR. SARIC: I understand what you are saying. I still think that based on like you said that from my headquarters and the lawyer's who obviously make a lot of these calls where it goes in our policy and how to deal with these changes, that it is clear that the pathforward would be a rod amendment in that case.

MS. CAMPBELL: It would be nice if some of those U.S. EPA lawyers come to some of these meetings and sit with us and listen to some of the stuff that we have to listen to and listen to some of the comments that we have to make. You know, I think that sometimes they might go away thinking a little bit differently than sitting in their little, you know,

cubby holes at their headquarters in Washington making these off the wall decisions on things that don't basically even affect them that mostly affects folks like us. That really burns me. That really makes me angry.

MR. SARIC: I understand your concern Lisa, but I think part of the thing that is not, you know, when they make some of these decisions, I know what we're going to do here and trying to work through this but a lot of their concerns are like at the national level how something here would affect other projects nationally, you know, non federal facility related projects, you know, that is pretty significant.

MR. MARTIN: I have just been studying back from this a little while and taking a look at it again. I just want to make a few observations if I could. The first thing I think, one of the lessons I hope that this site had learned with the vitrification is not to oversell technology. This presentation feels like overselling of cement to me. Vitrification is obviously on hold, it was a slam dunk and now it's looking like cement is a slam dunk even though we have a whole boatload of failures in the complex to support these very long lists of successes. That says cement is not easy and that's one of the things that the

independent review team said very clearly, both the majority and the minorities that there is a lot of holes in this and cement isn't easy. The waste loading assumptions can dramatically affect transportation and the effectiveness of the _____ barrier in the white metal boxes can affect both of those. The amount of cement that you can make in a day is obviously great uncertainty with the whole host of vendors that is out there and nobody really knows what they can do or what they will do and for what price and estimating any cost is somewhat dangerous at this point. Tailoring of the cement, which has come up several times here tonight is obviously a big concern. What the folks down the road have said who have done cement right somebody successful like the NFL, they took 12 years to figure out how to get their recipe and that's a long time. Comments on the explanation of significant difference, I'm concerned that almost any limitation of technology is a problem or limiting where the treatment can take place is a problem. I think if everybody had to do over again and this was the early 90, the record of decision would not have said vitrification, it would have said suitable stabilization, that means X, Y and Z criteria and would not have been technology. If

changing the technology does not trigger rod amendments, certainly there is no driver for the record of decision to actually be technology specific so even eliminating these two I think is relatively dangerous. One of the things that was obvious during the IRT process was the momentum that the project had. It had tripped up several times obviously with the pilot plant but there was still a real sense here onsite that it did not want to get bogged down and reduce the momentum in the project. I am sitting here feeling like that is exactly like what has happened. I pulled out one of the old schedules which is admittedly an aggressive rough schedule but it doesn't seem like where we are sitting today is any closer to the final solution. Just statusing some of these things. The explanation of significant difference according to this is it's to be approved by the EPA by May 7 and now we're talking about starting the cycle on September 15. We are looking at in this schedule awarding Silo 3 solidification to the vendors February and that is really obviously to be a push. One of the other things that was important and again it came up tonight was retrievable. What has happened to the focus on retrievables? Again, looking at the schedule we are talking about waste sampling insulation of the

and it basically originated in October of last fall with DOE's request for extension of committing full scale design for the vitrification facility and we denied that request and went into the dispute resolution last fall. We are trying to figure out what is the best pathforward to get forward with the project. We were very excited about the project, obviously we had gone to the pilot plant and vitrification phase and that kind of blended in and we tried to resolve the dispute in the pathforward where we are and we ended up resolving it this past July. There is a fact sheet that is, as Gary said that got sent out Monday that several of you have received or will receive this week and that kind of outlines everything that is going to go on and basically what we are going to do is have a public comment period of that fact sheet that's going to run from August 4 through September 3 and on August 26 and I think it's going to be here and we're going to have a public meeting in the evening of August 26 and talk about this thing in more detail about the dispute settlement and take any comments that you have on this dispute settlement and we may modify it after that so I just wanted to sort of get any input that you have on that but essentially the settlement is four parts. The

waste material system sub components by last month, I'm not sure if Silo 4 demonstration was to start July 2, just a few days from now and actual retrieval of Silo 3 starting in December. Whatever pathforward has chosen, obviously the cost and risks as Al pointed out are going up every day and it just seems that that momentum has slipped and there's a lot of things falling out of play while we get bogged down with decisions. We don't really expect a reply on this but I do want to make that observation not having been around for a while.

MR. STEGNER: Thank you Todd. I think now it's probably appropriate to bring up Jim Saric who made some references this evening to a settlement in our dispute on Unit 4. Some of you may have received a mailing, maybe today if not you will probably receive it tomorrow basically detailing or getting an overview of the contents of that settlement and Jim is here right now to make a presentation on that and EPA's taking on the settlement and answer you questions.

MR. SARIC: Yes, I would like to take a few minutes just to update you on where we are in this dispute settlement. On the 22nd of July we resolved this Operable Unit 4 dispute between DOE and ourselves

first part are new schedules based on the pathforward, what do we do with Silo 1, 2 and 3 and for Silo 3 the agreed pathforward would be go forward to ESD and that document would be submitted in September. For Silos 1 and 2, you know, based on the input that we have on DOE, we proceeded with the rod amendment with the pathforward that we had to make and we came up with the schedule of the feasibility schedule and a proposed planned document will be submitted and a rod amendment will be submitted approximately in February of the year 2000 and on in December of the year 2000 and that has been scheduled and we are certainly out there with always, but you know, the thought being we are going to get some activity with Silo 3 up front so it's part of it. The second part of the settlement that we will complete is there is a document in the back of our settlement document, a lessons learned document. We were talking to DOE and got them to lay out what went wrong with the Silos 1, 2 and 3 and what went wrong with the vitrification project and how can lessons be learned from that project put over toward other large scale projects. How can we be assured that the design phase and formal phase is large scale mediation and how can we be sure this thing will be better in the future so that is laid out. Another

thing there is 5 environmental projects that DOE is going to implement and directly impact the site and those five projects that require DOE to spend approximately a million dollars to implement those five projects. That will be part of those and the last part is DOE has agreed to pay $100,000 monitoring fee for the resolution of the dispute. That is essentially what the proportions are of this dispute settlement and I will go into more detail on the 26th but that's what the fact sheet is going to tell you about, what is going on and, you know, again, we are, we want a resolution and we want this thing to keep moving forward on this project. If you have any questions we will be glad to answer any of them afterwards.

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Proceedings concluded at 8:40 P.M.